

ABSTRACT OF THE DISCLOSURE

A cache memory system having a small-capacity and high-speed access cache memory provided between a processor and a main memory, including a software cache controller for performing software control for controlling data transfer to the cache memory in accordance with a preliminarily programmed software and a hardware cache controller for performing hardware control for controlling data transfer to the cache memory by using a predetermined hardware such that the processor causes the software cache controller to perform the software control but causes the hardware cache controller to perform the hardware control when it becomes impossible to perform the software control.